

## Durham Research Online

---

### Deposited in DRO:

07 June 2011

### Version of attached file:

Published Version

### Peer-review status of attached file:

Peer-reviewed

### Citation for published item:

Mitchell, P. D. and Millard, A. R. (2007) 'Migration in the crusades to the medieval Middle East.', British Academy review, 10 . pp. 24-25.

### Further information on publisher's website:

<http://www.britac.ac.uk/pubs/review/10/index.cfm>

### Publisher's copyright statement:

### Additional information:

---

### Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in DRO
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full DRO policy](#) for further details.

# Migration in the Crusades to the Medieval Middle East

**Dr Piers D. Mitchell**, of Imperial College London, and **Dr Andrew R. Millard**, of Durham University, describe the first surprising results from their research into the migration patterns of Europeans taking part in the Crusades. Their project illustrates the significant role scientific archaeology can play in supplementing knowledge based on the historical record.

**T**HE CRUSADES to the Middle East were a momentous time in the history of the medieval world. In the twelfth and thirteenth centuries hundreds of thousands of Europeans travelled to the eastern Mediterranean either in military expeditions, as pilgrims, or for trade. Many settled there and lived in the Frankish states, which were established along the coast on land that is now part of Turkey, Syria, Lebanon, Israel, Palestine and Cyprus (Setton 1955–89).

It is important for us to know where the European settlers lived and how well they integrated with the local population. This information can be used to understand the structure of the armies of the Frankish states, the new judicial legislation created there, religious life in holy sites, discrimination and tolerance between invading and indigenous communities, and population health inequalities (Mitchell 2004). Attempts have been made using historical methods to determine the population structure of these Frankish states in the Latin East (Ellenblum 1996). However, there are large gaps in the historical record; this project attempts to bridge them using archaeological methods, with dental isotope analysis.

## Stable Isotope Analysis

People who are born and grow up in a particular geographical region have specific combination of stable isotopes preserved in the enamel of their teeth. Unlike minerals in bone, these values do not change during the lifetime of the individual. Isotope ratios of oxygen and strontium are particularly useful in this kind of geographic study (Budd et al, 2004). Oxygen isotopes vary systematically with climate so that drinking water maps have been devised for Europe and the Middle

East. Dietary strontium isotopes vary with geology and the young (Tertiary and Quaternary) geology of our study region is quite distinctive compared to most of Europe. The teeth were sampled and the isotope analysis was performed at Durham University. Oxygen isotopes were measured with Continuous Flow Isotope Ratio Mass Spectrometry, while strontium isotopes were measured with Plasma Ionisation Multi-collector Mass Spectrometry (Figures 1 and 2).

## Investigating Crusader Immigration

This study aimed to identify first generation European immigrants among populations of the crusader kingdom of Jerusalem and, in some cases, determine which part of Europe or the Middle East each individual spent their childhood. Dental samples from three crusader sites and soil samples from five crusader sites were analysed. Caesarea was a bustling port city where ships from Europe would dock (Figure 3). We analysed ten individuals of presumed high status who



Figure 1: Sectioning a tooth for analysis

were buried at the cathedral, and ten of lower status buried in a cemetery outside the walls. Jacob's Ford Castle was a crusader stronghold on the River Jordan, just to the north of Lake Tiberias (Sea of Galilee). It was destroyed in 1179 following a siege by Saladin, Sultan of Egypt. We analysed three soldiers from the army of the king of Jerusalem who were killed



Figure 2: Prepared oxygen isotope samples being loaded into the mass spectrometer in the Department of Earth Sciences, Durham University



Figure 3:  
Crusader period walls of  
Caesarea, built 1252 AD  
(reproduced with the  
permission of Cambridge  
University Press, from  
Mitchell PD, *Medicine in  
the Crusades: Warfare,  
Wounds and the Medieval  
Surgeon*, 2004)

in the sack of the castle. Parvum Gerinum was a village of local orthodox Christian farmers in Galilee at the time of the crusades. It was defended by a tower manned by the knights Templar. We analysed two 12th century individuals thought to be local farmers from the village.

### Evidence for Migration

At Caesarea we expected to find a mixture of European immigrants, the offspring of settlers born locally, and members of local indigenous communities. We thought the Europeans would be the high status burials, and indigenous Christian population the low status burials. However, our findings were dramatically different to this. It seems the city of Caesarea was heavily dominated by crusaders and new European immigrants. Very few descendants of settlers or indigenous Christians were buried there. Nineteen of the twenty individuals tested were not locally born, and only one could have had a Levantine childhood. Furthermore, the social status of inhabitants of Caesarea does not appear to have been linked with geographical origin. The wealthy burials around the cathedral and the poor burials outside the walls were not differentiated into immigrants and those born in the Latin East. This is new information not recorded in the written texts, and will rewrite how we interpret life in the crusader port cities.

The next fascinating results came from the soldiers from Jacob's Ford Castle who died in 1179. They demonstrated that the army of the king of Jerusalem was comprised of both

European crusaders and the descendants of settlers, or local recruits. This matches the evidence found in crusader period written manuscripts. Of the three soldiers tested who died at the battle, one was from northern Italy or Britain. The other two were probably from the Levant, but may possibly have come from western France or Germany.

Finally, the findings from the farming village of Parvum Gerinum closely reflected what we expected. The inhabitants of the village who were tested all had isotopes consistent with a childhood spent in the area of the village. This fits in well with our understanding of minimal travel by poor peasants in the medieval period.

### Conclusion

Here we have demonstrated how archaeological techniques can identify the huge journeys undertaken by crusaders, pilgrims and merchants in the medieval period. No longer can we presume that those who died in a city necessarily lived there long term. Stable isotope analysis is able to identify that they originated from long distances away, and thus may just have been passing through. There is great potential for further research based on the findings we have from this project. For example, using this technique would allow us to compare standards of health between those born in Europe and those born in the Middle East. This will help us to determine whether or not either group gained a health advantage from their cultural upbringing. It appears that stable isotope analysis of teeth from

excavated individuals has the potential to rewrite many traditional views of life in past populations.

### Acknowledgements

We would like to thank Professor Ronnie Ellenblum and Professor Kenneth Holum for permission to study material from the Jacob's Ford Castle and Caesarea excavations. We are also grateful to Graham Pearson, Geoff Nowell, and Colin Macpherson of the Northern Centre for Isotopic and Elemental Tracing, Durham University, for access to mass spectrometry facilities.

### References

- Budd P, Millard A, Chenery C, Lucy S, and Roberts C (2004) Investigating population movement by stable isotopes: a report from Britain. *Antiquity* 78:127–140.
- Ellenblum R (1996) Colonization Activities in the Frankish East – the Example of Castellum-Regis (Milya). *English Historical Review* 111:104–122.
- Mitchell, P.D. (2004) *Medicine in the Crusades: Warfare, Wounds and the Medieval Surgeon*. Cambridge: Cambridge University Press.
- Setton KM, editor. (1955–89). *A History of the Crusades*. 6 volumes. Philadelphia: University of Pennsylvania Press (vol.1) and Madison: University of Wisconsin (vols.2–6).

---

Dr Mitchell and Dr Millard received support under the Small Research Grant scheme to fund the analysis of dental samples.

---